

REMARKS

The Drawings

In the November 17, 2007 Office Action, applicants were asked to submit formal drawings to replace the informal drawings that were originally filed in this patent application. Applicants are therefore submitting formal drawings concurrently herewith.

Amendments of the Claims

The following listing of claims, if entered, will replace all prior versions, and listing, of claims in the above-identified patent application:

Listing of Claims

1. (currently amended) A method of generating a user non-volatile memory interface megafunction for a programmable logic device having a user accessible non-volatile memory ("UNVM"), the programmable logic device including a raw UNVM interface for passing signals to and from the user accessible non-volatile memory, the method comprising:

selecting an interface protocol;

specifying zero~~one~~ or more parameter values for the selected interface protocol;

generating a user non-volatile memory interface megafunction using the selected interface protocol and the specified ~~one or more~~ parameter values;

configuring the programmable logic device as the user non-volatile memory interface using the generated user non-volatile memory interface megafunction;

wherein the generated user non-volatile memory interface passes signals to and from the raw UNVM interface.

2. (original) The method of claim 1 wherein the interface protocol is selected from a group comprising one or more of the following: None, Parallel interface, SPI interface, I²C interface, 3-wire interface and 3-wire compatible interface.

3. (original) The method of claim 1 wherein the one or more parameter values include one or more of the following: memory type, memory configuration, mode, page size, and/or device address.

4. (original) The method of claim 3 wherein the memory type is selected from one or more of the following: 2 Kbits or 4 Kbits.

5. (original) The method of claim 3 wherein the memory configuration is selected from one or more of the following: 1 Kbits: 64x16, 1 Kbits: 128x8, 2 Kbits: 128x16, 2 Kbits: 256x8 or 4 Kbits: 256x16.

6. (original) The method of claim 3 wherein the mode is selected from at least the following: read only or read/write.

7. (original) The method of claim 3 wherein the page size is selected from at least the following: 8 bytes, 16 bytes, or 32 bytes.

8. (currently amended) The method of claim 3[1] wherein the device address is a binary number value.

9. (cancelled)

10. (original) The method of claim 1 further comprising compiling an electronic design including instructions specifying the user non-volatile memory interface megafunction to produce instructions for producing an integrated circuit having the user non-volatile memory interface megafunction incorporated therein.

11. (original) The method of claim 1 wherein the one or more parameters are specified on a graphical user interface.

12. (cancelled)

13. (cancelled)

14. (cancelled)

15. (cancelled)

16. (cancelled)

17. (Currently Amended) A computer program product comprising a computer readable medium on which is stored program instructions for a method of generating a user non-volatile

memory interface megafunction for a programmable logic device having a user accessible non-volatile memory ("UNVM"), the programmable logic device including a raw UNVM interface, the method comprising:

selecting an interface protocol;
specifying zero or more parameter values for the selected interface protocol;

generating a user non-volatile memory interface megafunction using the selected interface protocol and the specified one or more parameter values; and Interface.

configuring the programmable logic device as a user non-volatile memory interface using the generated user non-volatile memory interface megafunction.

18. (currently amended) A method of providing compilable variations of a user non-volatile memory interface for an electronic device design, the user non-volatile memory interface requiring specific settings before it can be compiled to unambiguous circuit blocks ~~forming parts of electronic designs~~, the method comprising:

receiving a set of option settings containing user-selected settings for the a user non-volatile memory interface, the set of option settings being selected from a plurality of sets of option settings wherein each set of option setting corresponds to one of a plurality of interface protocols;

generating a compilable variation file specifying the received set of option settings; and

using the compilable variation file to generate unambiguous circuit blocks of an electronic device; and

configuring the electronic device as the unambiguous circuit blocks using the generated user non-volatile memory interface megafunction;

wherein the electronic device includes a user accessible non-volatile memory and a raw UNVM interface for passing signals to and from the user accessible non-volatile memory and wherein the user non-volatile memory interface passes signals to and from the raw UNVM interface.

Summary of the Office Action

Claim 17 was objected to.

Claim 9 was rejected under 35 U.S.C. §112, second paragraph.

Claims 1-18 were rejected under 35 U.S.C. §102(e) as being unpatentable over Peck et al. ("Peck")

Applicants' Reply

Claims 1, 8, 17 and 18 have been amended.

Claims 9 and 12-16 have been cancelled.

This application is directed towards a programmable logic device having a non-volatile memory where a portion of the memory is user accessible (see, Specification, page 2, lines 29-22) A graphical user interface described in the invention provides users with the option of selecting a desired interface protocol, where the user's selection enables to user to have flexibility through the ability to customize a memory interface

by selecting from several available protocols. The protocol selection minimizes the circuitry used on the programmable logic device configured to act as an interface from one or more portions for the programmable logic device to the user accessible portion of the non-volatile memory (see, Specification, page 2, lines 8-15).

Applicants respectfully submit that Peck neither shows nor suggests the claimed invention. The examiner has pointed to language in paragraph 0014 of Peck that shows a GUI for indicating requirements of a measurement task. The GUI is used to help select and configure appropriate measurement systems in the form of software programs or reconfigurable hardware. However, the elements of Peck identified by the Examiner do not include configuring the programmable logic device as the user non-volatile memory interface using the generated user non-volatile memory interface megafunction; wherein the user non-volatile memory interface passes signals to and from the raw UNVM interface, as set forth in amended independent claims 1 and 17. In addition, Peck does not show configuring the electronic device as the unambiguous circuit blocks using the generated user non-volatile memory interface megafunction, wherein the electronic device includes a user accessible non-volatile memory and a raw UNVM interface for passing signals to and from the user accessible non-volatile memory and wherein the user non-



volatile memory interface passes signals to and from the raw UNVM interface, as set forth in amended claim 18.

It is axiomatic that to anticipate a claim, a reference must show each and every element of the claim to be anticipated. As discussed above for all pending independent claims, Peck clearly does not show a user non-volatile memory function interface that may be configured on a programmable logic device using a megafunction that is generated according to a selected interface protocol and parameter values, or a set of option settings selected by a user, wherein at least one interface protocol, or set of option settings permit a user to provide a custom interface design rather than simply select one of the predefined designs (see, Specification, page 10, line 33, through page 11, line 4).

The foregoing demonstrates that claims 1-8, 10-11, and 17-18 are in condition for allowance. This patent application is therefore in condition for allowance. Reconsideration of the application and allowance are respectfully requested.

Respectfully submitted,


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